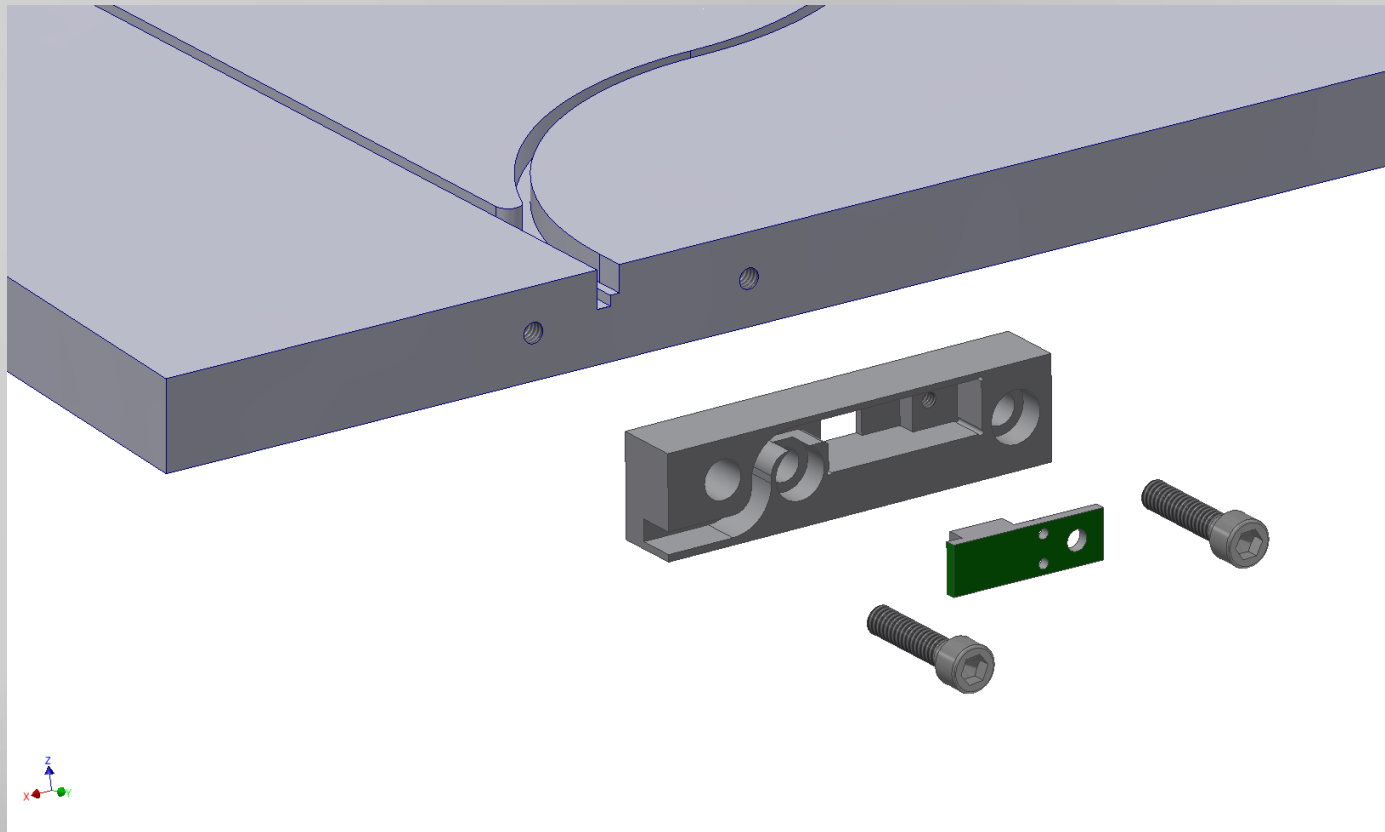


HCAL Light Collection Tile Design Improvements



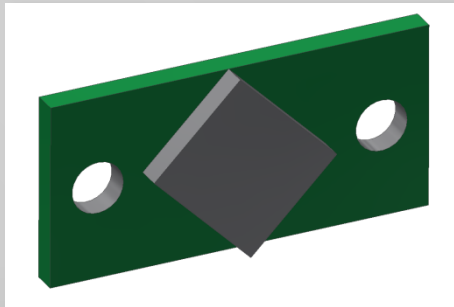
HCAL Light Collection Current



HCAL Light Collection Proposals



FIBERS EXIT TILE CENTERED
IN TILE ONE ABOVE THE OTHER



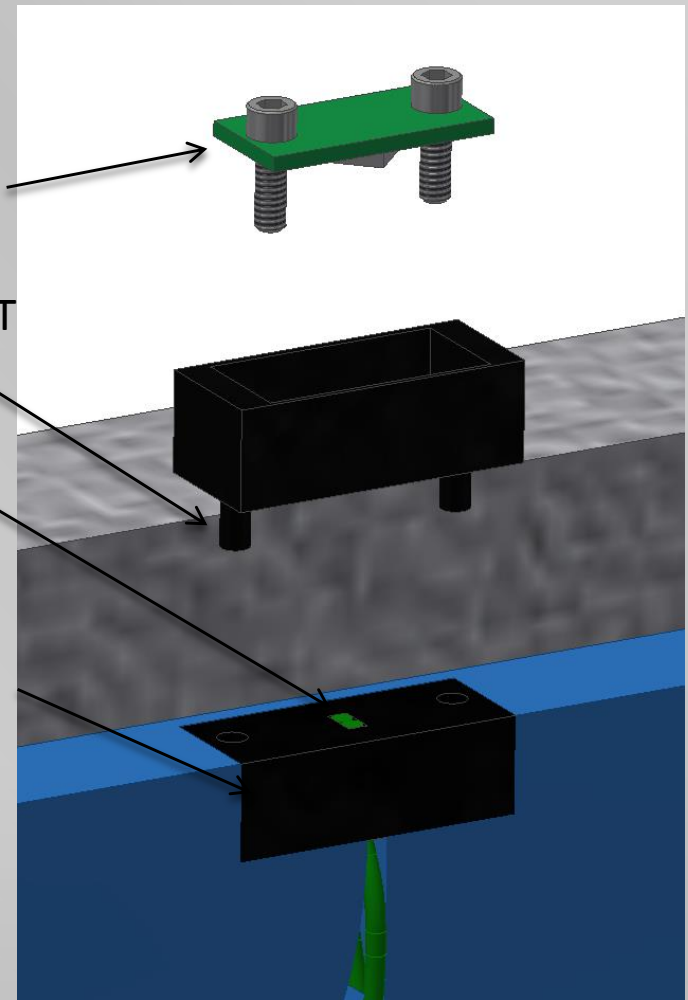
SiPM MOUNTED TO PC BOARD
ROTATED 45deg.

SiPM BOARD

ALIGNMENT
PINS

FIBERS

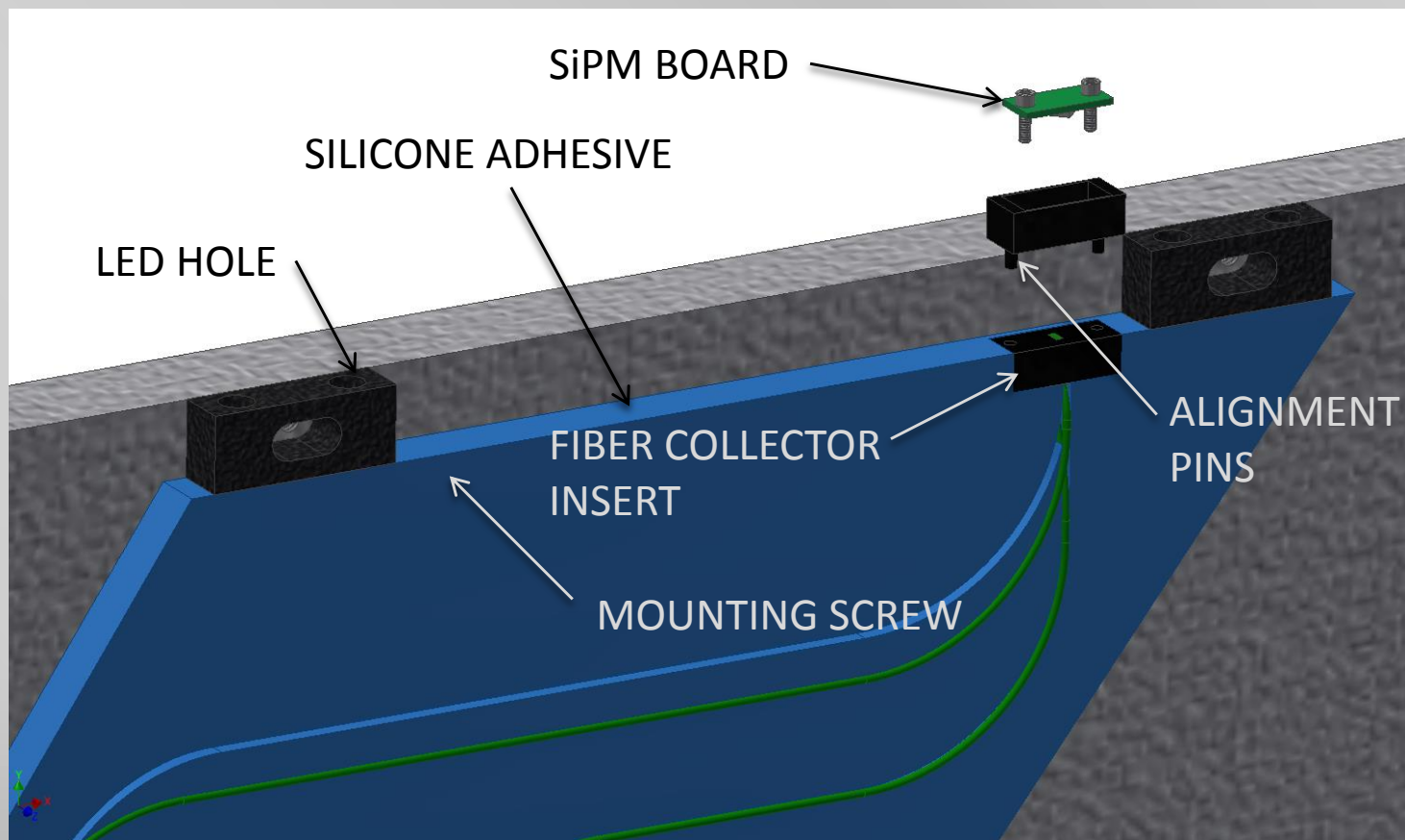
FIBER COLLECTOR
INSERT – TILE TO
BE NOTCHED OUT



HCAL Light Collection Proposals



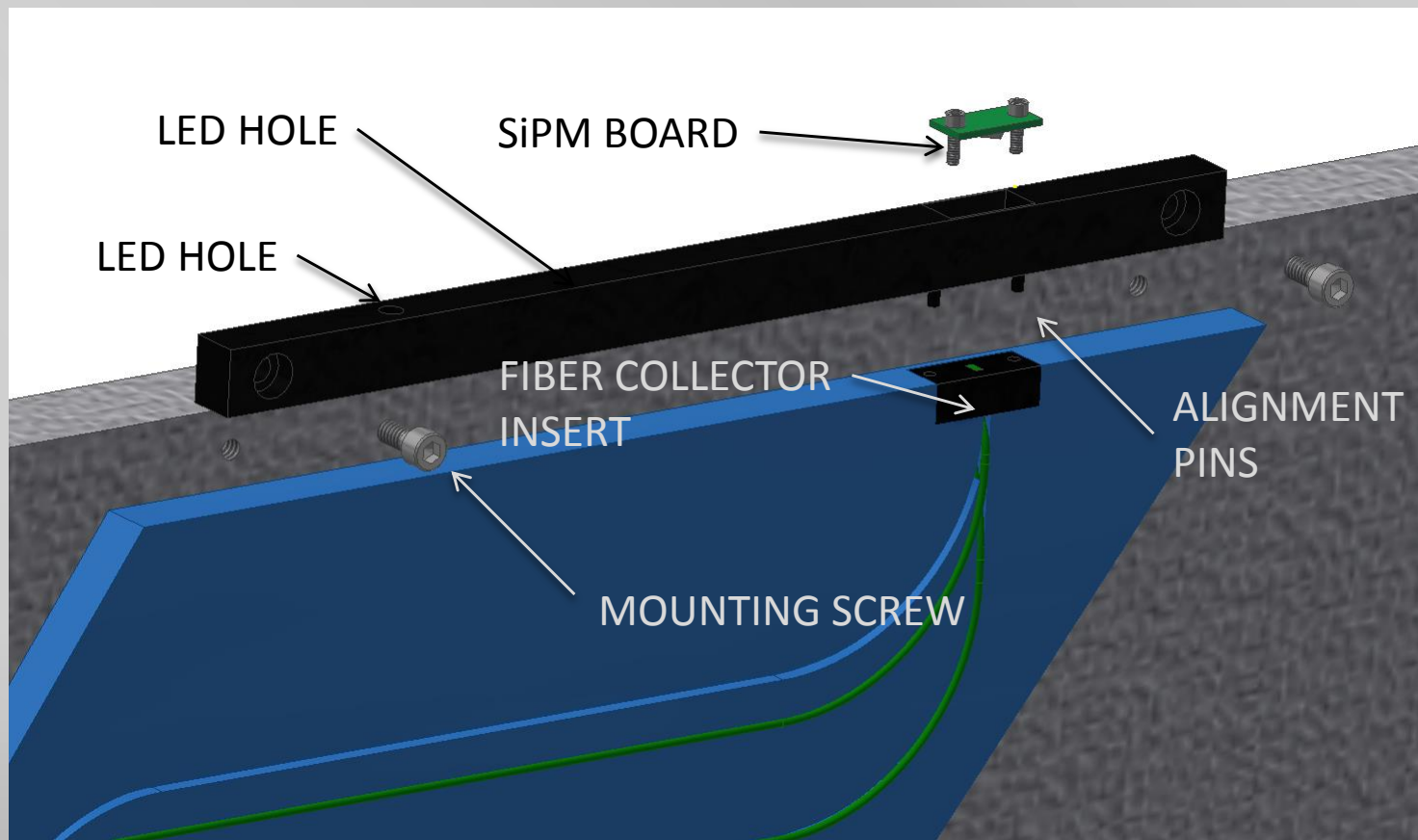
INDEPENDENT TILE MOUNTING AND SiPM ATTACHMENT



HCAL Light Collection Proposals



SINGLE BAR INTEGRATED TILE MOUNTING AND SiPM ATTACHMENT



Sector Mechanical Assembly

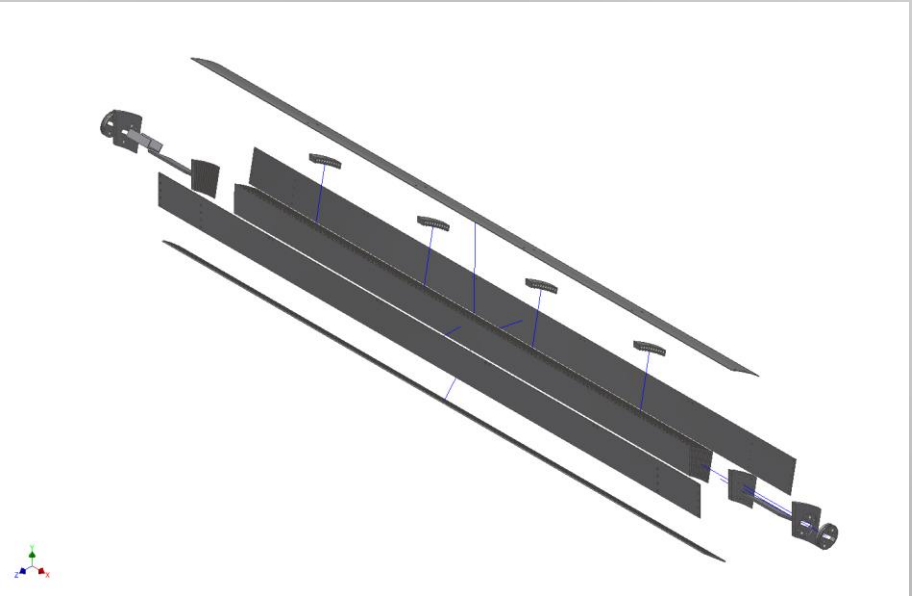
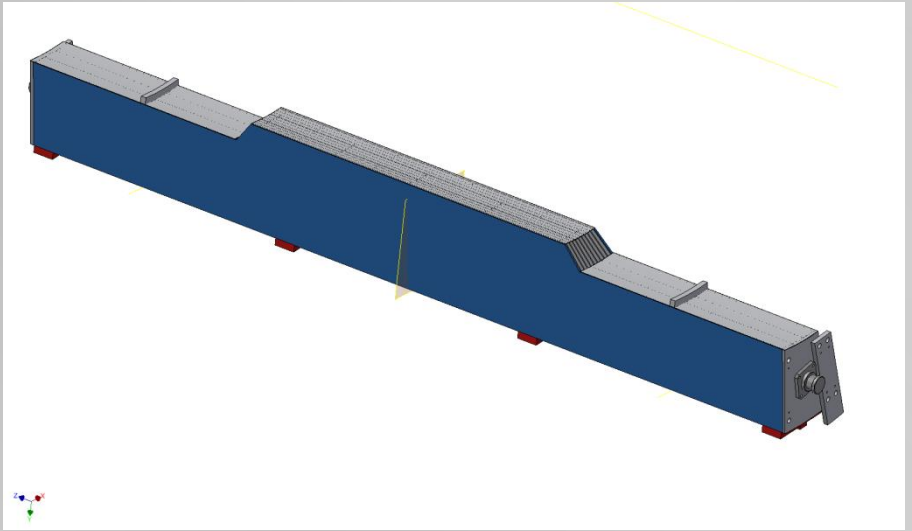
- Inner Absorber Plates
- Absorber End Plates
- End Plates
- Trunion
- Combs
- Outer Radius Covers

Additional Inner Hcal Parts

- Left Half Absorber
- Right Half Absorber
- Absorber Endplate (2)
- Base Plate
- Electronics Shelf

Additional Outer Hcal Parts

- Splice Plate
- Inner Radius Combs (2 Types)
- Inner Radius Covers (Multiple)



Things To Consider

- Updated Layout
- Tolerance Study (Parts & Assembly)
- Electronics Mounting
- Cable Routing / Management
- Light Tight Requirements
- Angle of Absorbers (32°)
- Tile Design (Mounting and SiPM & LED Attachment)

